Serial No.: 10/556,908

Filed: November 15, 2005

Page : 2 of 8

Amendment in the Claims:

1. (Original) A DC motor having magnets as a main source for generating a magnetic

flux and armature coils as a main source for generating a torque and using either thereof as a

rotor,

wherein the armature coil comprises:

an inner coil group formed by arranging, parallel with each other, a prescribed number of

hollow inner coil bodies of a prescribed shape wound with a conductor of a prescribed number of

turns on peripheral side surfaces of a virtual disc or a disc-shaped core; and

an outer coil group formed by arranging, parallel with each other, a prescribed number of

hollow outer coil bodies of a prescribed shape wound with a conductor of a prescribed number of

turns on peripheral side surfaces with the inner coil group taken as a virtual disc while covering

the inner coil group.

2. (Original) The DC motor according to claim 1, wherein the peripheral side surface of

the inner coil group is made externally flush with the peripheral side surface of the outer coil

group.

3. (Currently Amended) The DC motor according to claim 1 or 2, wherein the respective

inner coil bodies and the respective coil bodies are formed into a hollow and roughly trapezoidal

or a hollow and arrowed shape, each of the corresponding inner coil bodies is arranged at

intervals of 120 degrees, and wherein each of the corresponding outer coil bodies is shifted from

each of the corresponding coil bodies by 60 degrees and arranged at intervals of 120 degrees.

Serial No.: 10/556,908

Filed: November 15, 2005

Page : 3 of 8

4. (Currently Amended) The DC motor according to claim 2, wherein the respective inner coil bodies and the respective coil bodies are formed into a hollow and roughly trapezoidal or a hollow and arrowed shape, each of the corresponding inner coil bodies is arranged at intervals of 120 degrees, and wherein each of the corresponding outer coil bodies is shifted from each of the corresponding coil bodies by 60 degrees and arranged at intervals of 120 degrees.

The DC motor according to any of claims 1 to 3, wherein phases facing between the inner coil bodies and the outer coil bodies are connected in series or in parallel to each other, each of which is star-connected.

- 5. (Currently amended) The DC motor according to any one of claims 1 to 4 claim 1, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.
- 6. (Currently amended) The DC motor according to any one of claims 1 to 4 claim 2, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies formed by star connecting the respective inner outer coil bodies and the respective outer coil bodies and twofour brushes arranged at intervals of 90 degrees for the respective commutators.
- 7. (New) The DC motor according to claim 3, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the

Serial No.: 10/556,908

Filed: November 15, 2005

Page : 4 of 8

respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

8. (New) The DC motor according to claim 4, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

- 9. (New) The DC motor according to claim 1, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.
- 10. (New) The DC motor according to claim 2, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.
- 11. (New) The DC motor according to claim 3, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

Serial No.: 10/556,908

Filed: November 15, 2005

Page : 5 of 8

12. (New) The DC motor according to claim 4, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

13. (New) The DC motor according to claim 5, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

14. (New) The DC motor according to claim 6, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

15. (New) The DC motor according to claim 7, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

Serial No.: 10/556,908

Filed: November 15, 2005

Page : 6 of 8

16. (New) The DC motor according to claim 8, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to the respective inner coil bodies and the respective outer coil bodies and four brushes arranged at intervals of 90 degrees for the respective commutators.

17. (New) The DC motor according to claim 1, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.

18. (New) The DC motor according to claim 2, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.

- 19. (New) The DC motor according to claim 3, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.
- 20. (New) The DC motor according to claim 4, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective

Serial No.: 10/556,908

Filed: November 15, 2005

Page : 7 of 8

coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.

21. (New) The DC motor according to claim 5, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.

22. (New) The DC motor according to claim 6, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.

23. (New) The DC motor according to claim 7, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.

24. (New) The DC motor according to claim 8, wherein, in a case where the armature coil portion is made to serve as a rotor, the DC motor includes commutators adaptable to respective coil bodies formed by star-connecting the respective inner coil bodies and the respective outer coil bodies and two brushes arranged at intervals of 90 degrees for the respective commutators.